

FIELD-ASSISTED FUSION BONDING

Abstract

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A method of field-assisted fusion bonding produces multiple-layer devices. Contacts (301, 303, 305, 307, 309) are placed at various points along different surfaces of a combination of two or more wafers (201, 203, 205, 501, 503, 505, 801, 803). An electric field is applied to the contacts (301, 303, 305, 307, 309),
10 thereby creating an electrostatic attractive force between the wafers (201, 203, 205, 501, 503, 505, 801, 803). The temperature of the wafer combination is elevated to a fusion bonding temperature while the electric field is applied.